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ACTION BY:

Divisions and Offices Concerned

Procurement and Use of
Radioactive Materials and Radiation Equipment

I PURPOSE

This Instruction:

A *-Sets forth prior approval requirements which must be followed by all persons planning to acquire and use radioactive materials and/or radiation-emanating equipment.

B Specifies procedures for procuring such materials and/or equipment. ** *

II DEFINITIONS

A Radioactive material means radioisotopes, neutron sources or any other source, whether sealed or unsealed, which naturally or as a result of artificial inducement spontaneously emits radioactive particles and/or rays.

B *-Radiation-emanating equipment means irradiators, nuclear moisture density measurement gauges, static elimination devices,-* electron microscopes, X-ray machines, and other equipment or devices which are capable of emitting ionizing radiation.

III GENERAL

-Radioactive material and ionizing-radiation-emanating equipment present a potential health hazard. On behalf of the Secretary, the Agricultural Research Service is assigned responsibility for all administrative functions relating to radiological safety within agencies of the Department of Agriculture. The Radiological Safety Committee is responsible to the Administrator, Agricultural Research Service, for the performance of all necessary functions.-

IV RADIOLOGICAL SAFETY COMMITTEE

The Radiological Safety Committee *-develops, implements, and is responsible for such rules, procedures, instructions, and other measures as may be necessary to control the acquisition, use, and disposition, from the standpoint of radiation safety, of all radioactive and radiation-emanating equipment.-*

DISTRIBUTION: A,M,O,S,F MANUAL MAINTENANCE INSTRUCTIONS: Changes marked by asterisks. Remove former C&MS Instr. 240-8 (3-8-66). File this Instruction.

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V RADIOLOGICAL SAFETY OFFICER

The Radiological Safety Officer is a member of the Radiological Safety Committee. He serves as contact with Department agencies on all matters requiring Committee approval. His mailing address is:

-Radiological Safety Officer Radiological Safety Staff U.S. Dept. of Agriculture BARC-West, Building 001, Room 226 Beltsville, MD 20705-

VI APPROVAL FOR USE OF MATERIALS AND EQUIPMENT

A When Required:

- 1 Prior approval must be obtained from the Radiological Safety Committee for the use of radioactive materials and/or *-radiation-emanating-* equipment. Instruments used or which could be used for the following purposes are included. (The listing below is not all-inclusive, but identifies some of the types which involve the use of radioactive material and/or *-radiation-emanating-* equipment.)
 - a X-ray diffraction.
 - b X-ray fluorescence analysis.
 - c X-ray radiography.
 - d X-ray therapy.
 - e Electron microscopy.
 - f Gas chromatography.
 - g Moisture determination by neutron moderation (RaBe or other neutron sources).
 - h Density or thickness determination (utilizing radiation other than visible or ultraviolet absorption or scattering).
 - i Soil density measurements by gamma ray absorption or scattering.
 - ${\tt j} \quad$ Sedimentation or total sediment by gamma ray absorption or scattering.

(VI A)

- 2 Prior approval must also be obtained from the Committee concerning the use of:
 - a Any sealed source of alpha, beta, or gamma radiation other than those generally furnished by manufacturers of counting equipment as standards for radioactive assay. This includes Co-60 sources issued by the Defense Civil Preparedness Agency for training purposes.
 - b Materials or equipment furnished free of charge. The request for approval shall identify the element, the quantity of material, and the source.

B Obtaining Approval.

- 1 Request for Approval. Divisions and Offices planning to use radioactive materials and/or *-radiation-emanating-* equipment in any way shall:
 - a Prepare a statement containing:
 - (1) A brief explanation of the objective of the undertaking.
 - (2) A detailed description of the laboratory or other type of space to be used. Where applicable, describe the equipment to be used for monitoring, survey, and assay, and the facilities for storage, handling, and waste disposal.
 - (3) A description of the plan of work including assay procedures to be used, if applicable.
 - (4) A statement of the qualifications of the personnel involved. Identify the individual who is to assume responsibility for health and hazard control. *-Use OA Form 30, Education and Radiation Training and Experience Report, available from the Radiological Safety Staff, to submit this information.-*
 - (5) Where a radioelement is to be used, give an estimate of amount required, desired chemical form, delivery schedule, *-and the maximum amount of each isotope that will be on hand at any one time.-*
 - b Forward the statement to the Property and Procurement Branch, Administrative Services (AS) Division.

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Notice of Action by Committee. *-Written notification by the Committee will be from the Radiological Safety Officer to the user, with a copy to the Property and Procurement Branch, AS Division. This notice will include a Radiological Safety Committee Identification Number (e.g., AMS-5), which shall appear on all requisitions and purchase documents, and such special instructions and forms as may be necessary. The notice shall constitute the user's authority, from the standpoint of radiological safety, to initiate the use program, including procurement action.-*

VII PROCUREMENT

- A <u>Action by Requisitioning Division</u>. Use *-Form AD-700,-* Requisition for Supplies, Equipment, or Services, to procure radioactive materials and/or *-radiation-emanating-* equipment after its use is approved.
- I Identification of Materials and Equipment. *-Include on Form AD-700 an introductory statement to identify materials and/or equipment to be procured, such as the following:-*
 - "The items listed below are radioactive materials and/or radiation-emanating equipment."
- 2 *-Notice on Requisition. Include on the requisition and purchase documents the following statement:
 - "Radiological Safety Committee Identification Number (enter number), Radioactive Material and/or Radiation-Emanating Equipment for (name of authorized user)."-*
- 3 Routing of Requisition. Forward the requisition for radioactive materials and/or *-radiation-emanating-* equipment to the Property and Procurement Branch. AS Division.
- 4 Free Materials or Equipment. Identify on the requisition materials and/or equipment which will be furnished free of charge.
- B Action by Property and Procurement Branch, AS Division. The Property and Procurement Branch shall prepare *-Form AD-838, Purchase Order,-* showing Notice of Action Number *-and user statement.-*
- 1 If procurement is to be from a *-non-Nuclear Regulatory Commission (NRC)-* contractor, forward the original and 2 copies to the Radiological Safety Officer. (The Radiological Safety Officer will notify the requisitioning Division when the purchase order is released to the supplier.)

(VII B)

or other *-NRC-* contractor, forward the original and 1 copy of *-Form AD-838-* and the original of *-Form NRC-375,-* Radioisotope Order Blank, to the Radiological Safety Officer for release to the supplier. This must be done even for amounts usually referred to as "generally licensed" or "exempt."

VIII RULES ON USE OF RADIOACTIVE MATERIALS AND *-RADIATION-EMANATING-* EQUIPMENT

- A <u>Use by Authorized Individuals</u>. Only authorized individuals shall use radioactive material and/or *-radiation-emanating-* equipment for the purposes approved by the Radiological Safety Committee. *-Concurrent with the Notice of Action sent the responsible user, the Committee will forward all necessary rules, procedures, and instructions that must be adhered to in using the particular radioactive material and/or radiation-emanating equipment.-*
- B Where Use Is Authorized. Radioactive material and/or *-radiation-emanating-* equipment approved by the Radiological Safety Committee may be used on land or in buildings owned by or under the immediate control of the Agency. They may be used on land or in buildings not owned by or under the immediate control of the Agency, provided an appropriate prior agreement is reached by the Agency and the owner. The *-Property and Procurement Branch, AS Division,-* is responsible for obtaining such agreement when needed.

IX COOPERATIVE WORK PROJECTS

The participation of employees in cooperative work projects involving the use of radioactive material and/or *-radiation-emanating-* equipment under the supervision of other than a Department agency must have prior approval of the Radiological Safety Committee. Such approval shall be obtained by the Property and Procurement Branch, AS Division.

X DISPOSITION OF RADIOACTIVE MATERIALS AND/OR *-RADIATION-EMANATING-* EQUIPMENT

A transfer, exchange, or other disposition of radioactive material and/or *-radiation-emanating-* equipment to other than organizational units or individuals to which originally consigned shall <u>not</u> be made without prior approval of the Radiological Safety Committee. Such approval shall be obtained by the Property and Procurement Branch, AS Division.

Irving W. Thomas

Deputy Administrator, Management

Twing W. Thomas

